REMARKS/ARGUMENTS

In the specification, paragraph [0184] has been deleted and paragraphs [0166], [0176], [0181], [0187], [0191], [0192], [0194], [0195] and [0197] have been amended for the sake of clarity in the description of the invention. These amendments do not constitute new matter.

Claims 1-13 and 48 were pending in this application. New claims 49 and 50 have been added to this application by this amendment. It is understood, and requested that, upon acceptance and entry of this amendment by the Examiner, claims 48-50 will be renumbered, particularly so that pending claim 49, from which pending claim 48 now depends, will be placed in suitable order to properly reflect this claim dependency.

Claims 1-3, 11, and 48 have been amended to clarify the methods of the invention. Support for the amendments made herein, with respect to the reporter gene being expressed during early proviral gene expression, can be found in the specification as filed, including at: page 3, lines 34-36 onto page 4, lines 1-2; page 15, lines 8-13; page 42, lines 7-9; page 43, lines 3-5; and page 44, lines 5-6. Support for the amendments made herein, with respect to identifying a $CD8^+$ suppressor molecule in a sample containing a recombinant product expressed from a cDNA library obtained from a $CD8^+$ suppressor cell that produces a $CD8^+$ suppressor molecule, can be found in the specification as filed, including at: Example 5.5 (pages 19-21), and at page 46, lines 8-18. Support for the amendments made herein, with respect to the stage or stages of the virus life cycle in which a $CD8^+$ suppressor molecule having antiviral activity acts can be found in the specification as filed, including at: page 3, lines 23-30; page 11, lines 14-18; page 12, lines 15-22; and Example 10 (pages 35-40). Support for the amendments made herein, with respect to Claim 48, directed to the order in which the steps of the method are performed and the applicability of the one or more time intervals, can be found in the specification as filed, including at: pages 16-19; pages 38-40 (in the section, "Single Cycle HIV Infection Assay", which particularly refers to the 48 hour time interval for assays, and refers to assay results and time intervals up to and including 48 hours); FIG. 18A; page 43, lines 25-30 onto page 44, lines 1-2; and page 44, lines 11-30 onto page 45, lines 1-6.

1. The rejection of claim 48 under 35 U.S.C. §112, second paragraph, should be withdrawn

Reconsideration of the rejection of claim 48 under 35 U.S.C. §112, second paragraph, as being indefinite, is respectfully requested. Claim 48 has been amended to more particularly point out and distinctly claim the subject matter which applicants regard as their invention. In particular, Claim 48 has been amended to clarify at which point in the method the contact step and measuring steps are to be performed. It is believed that Claim 48 as amended meets the requirements under 35 U.S.C. §112, second paragraph. Thus, it is respectfully requested that the Examiner reconsider and withdraw the §112 rejection.

2. The rejection of claims 1-13 and 48 under 35 U.S.C. §103(a) should be withdrawn

Reconsideration of the rejection of claims 1-13 and 48 under 35 U.S.C. §103(a), as being obvious in view of the combination of Brinchmann et al. (1990), Connor et al. (1995), and Jackson et al. (1998), is respectfully requested. The Examiner has represented that the Brinchmann et al. reference describes evidence for a soluble inhibitor of HIV replication originating from $CD8^+$ cells; that Connor et al. used a single-cycle luciferase HIV-1 reporter vector that either contained or lacked HIV *vpr* to analyze the role of *vpr* in the infection of monocytes/macrophages by HIV; and that Jackson et al. produced an HIV-pseudotyped retrovirus expressing the anti-tat ribozyme (*see* pages 82 and 83 of Jackson et al.).

Claims 1 and 11, and therefore claims dependent thereon, have been amended to recite a method for identifying a $CD8^+$ suppressor molecule that has anti-HIV-1 activity, wherein the method uses a replication-deficient HIV pseudotyped virus comprising a reporter gene operatively associated with an HIV promoter, wherein a host cell is contacted with the replication-deficient HIV pseudotyped virus and then contacted with a sample that may contain the $CD8^+$ suppressor molecule, wherein the reporter gene is expressed during early proviral gene expression (emphasis added), and wherein detection of an inhibition in reporter gene activity during a stage or stages of the pseudotyped viral replication cycle subsequent to viral entry, including but not later than the stage of early proviral gene expression (emphasis

added), identifies the presence of a $CD8^+$ suppressor molecule that has anti-HIV-1 activity in the sample.

Applicants point out that the mere fact that references can be combined or modified does not render the resultant combination obvious, unless the prior art also suggests the desirability of such combination (MPEP 2143.01; citing *In re Mills*). Even though the cited references fail to teach or suggest the invention recited in the amended claims, should the Examiner nevertheless consider that a combination of these references could lead to the present invention, proper consideration of the cited references still fails to motivate or suggest the desirability of pursuing such a combination of the teachings, without the benefit of hindsight based on the teachings of the present disclosure.

Furthermore, as the Examiner is aware, to establish *prima facie* obviousness of a claimed invention, all of the recited claim limitations must be taught or suggested in the prior art (**MPEP 2143.03**). As the Examiner points out on page 3 of the Office Action, the Brinchmann et al. reference "does not disclose the utilization of a retroviral vector particle pseudotype assay to assay the stage of replication wherein viral replication is impaired" in the presence of a $CD8^+$ suppressor molecule that has anti-HIV-1 activity. It is respectfully pointed out that the Brichmann et al. reference, the Conner et al. reference, and the Jackson et al. reference, whether considered singly or in combination, fail to teach or suggest which stage or stages in the virus life cycle are inhibited by a $CD8^+$ suppressor molecule that has anti-HIV-1 activity. This point is important, as the method as recited in the amended claims accounts for discrete stages of the viral life cycle and is able to discriminate between inhibition due to a $CD8^+$ suppressor molecule present in the sample from inhibition due to other (nonspecific or specific) inhibitors of HIV that may be present in the sample. Accordingly, even taken in combination, the references cited by the Examiner still fail to teach or suggest all of the claim limitations recited in amended Claims 1 and 11 (and dependent claims thereon).

The Examiner is respectfully directed to the Federal Circuit decision in *CFMT, Inc. v. Yieldup International*, 349 F.3d, 1333, 1342 (Fed. Cir. Nov. 2003), which states:

> Thus, the examiner concluded that no combination of the prior art, even if supported by a motivation to combine, would disclose all the limitations of

> a claim. In other words, the examiner detected, in light of all the limitations of the claims, no obviousness. See In re Gulack, 703 F.2d 1381, 1385 n.9 (Fed. Cir. 1983); In re Royka, 490 F.2d 981, 985 (CCPA 1974) (obviousness requires a suggestion of all limitations in a claim).

The Examiner is also respectfully directed to the requirements of obviousness, and the citation of *In re Wilson*, in MPEP 2143.03, "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 242 F.2d 1382, 1385 (CCPA 1970).

Accordingly, because there are limitations in the amended claims that are not taught or suggested in the combination of the prior art cited by the Examiner, there can be no obviousness. Therefore, even should the Examiner nonetheless believe that there is some motivation for one skilled in the art to adopt and practice the teachings of the cited references in the cited combination, there is still as yet no obviousness because the combination of references fails to teach or suggest all of the claim limitations as recited in amended Claims 1 and 11 (and dependent claims thereon) (see MPEP 2143.03, and *CFMT, Inc. v. Yieldup International, supra*).

For the reasons set forth above, and in view of the amendments to the claims, the Applicants submit that the claimed invention recited in amended Claims 1 and 11 (and dependent claims thereon) is patentable over the cited references of Brinchmann et al. (1990), Connor et al. (1995), and Jackson et al. (1998), whether considered individually, or in combination. Therefore, it is respectfully requested that the Examiner reconsider and withdraw the §103(a) rejection.

3. The rejection of claims 1-13 and 48 under the judicially created doctrine of obviousness-type double patenting should be withdrawn

Reconsideration of the rejection of claims 1-13 and 48 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,586,174, claims 1-4 of U.S. Patent No. 5,861,490, and claims 1-5 of U.S. Patent

No. 5,627,023, in view of the combination of Connor et al. (1995) and Jackson et al. (1998), is respectfully requested. The referenced patents are assigned to the present assignee.

Notwithstanding the amendments to Claims 1, 11 and 48 herein, Applicants have submitted herewith a Terminal Disclaimer, thereby obviating the double patenting rejection. The Terminal Disclaimer removes the double patenting rejection and shortens the term of a patent issued thereon, but it raises neither a presumption, nor estoppel, nor admission that the claimed invention is obvious in view of the patent cited by the Examiner, a prior claimed invention or combination of prior claimed inventions. *See, e.g., In re Ortho Pharmaceutical Corp. v. Smith* 959 F.2d 936, 941-942, 22 U.S.P.Q. 2d 1119, 1123-24 (Fed. Cir. 1992); *Quad Environmental Technologies Corp. v. Union Sanitary Dist.* 946 F.2d 870, 874-875, 20 U.S.P.Q. 2d 1392, 1394-1395 (Fed. Cir. 1991).

Therefore, it is respectfully requested that the Examiner withdraw the obviousness-type double patenting rejection.

CONCLUSION

Applicants respectfully request entry and consideration of the foregoing amendments, remarks, and the Terminal Disclaimer submitted herewith into the file history of the above-identified application. It is believed that upon entry of the foregoing, the application is now in condition for allowance, and the Applicants respectfully request such favorable action from the Examiner. Should any outstanding issue remain, the Examiner is respectfully encouraged to telephone the undersigned to discuss.

Respectfully submitted,

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Enclosures

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